

ABSTRACT OF THE DISCLOSURE

A chemical vapor deposition (CVD) apparatus includes a process chamber where a deposition process is performed on a wafer. A gas supply assembly is mounted in the process chamber for supplying a process gas to the process chamber, and a vacuum pump is mounted in the process chamber for exhausting the process gas. A support is mounted in the process chamber for supporting the wafer, and a position control assembly raises and lowers the chuck. A controller controls the position control assembly to vary a distance between the wafer and the gas supply assembly during the deposition process. A CVD method for forming a deposition layer on a wafer includes supplying a process gas to a process chamber, dividing a process time into a plurality of process stages, varying a distance between the wafer and a gas supply assembly according to the process stages, and exhausting the process gas.